

***Amendments to the Claims***

The listing of claims will replace all prior versions, and listings of claims in the application.

1. *(presently amended)* A method of interfacing between one or more requestors and one or more airline availability information sources, comprising
  - querying one or more airline availability information sources for airline availability information;
  - receiving the requested airline availability information from the one or more airline availability information sources;
  - caching the received airline availability information;
  - receiving queries from requestors for airline availability information;
  - prioritizing the requestor queries;
  - processing the requestor queries in accordance with the associated priorities;
  - determining to provide the requestors with at least one of real-time airline availability information and cached airline availability information based at least in part on one or more factors associated with one or more of the requestors, the requestor queries, the requested airline availability information, and[[/or]] the airline availability information sources; and
  - providing information to the requestors in accordance with the determining.

2. *(previously presented)* The method according to claim 1, further comprising:  
  
monitoring airline availability information traffic between an airline availability information source and one or more clients of the airline availability information source; and  
  
caching at least a portion of the monitored airline availability information.
3. *(previously presented)* The method according to claim 1, further comprising:  
  
proactively generating one or more queries independent of requestor queries; and  
  
sending the one or more proactively generated queries to an airline availability information source and caching information returned therefrom.
4. *(previously presented)* The method according to claim 1, further comprising:  
  
monitoring airline availability information traffic between an airline availability information source and one or more clients of the airline availability information source;  
  
caching at least a portion of the monitored airline availability information;  
  
proactively generating one or more queries independent of requestor queries; and  
  
sending the one or more proactively generated queries to an airline availability information source and caching information returned therefrom.

5. *(previously presented)* The method according to claim 3, further comprising:
  - adding the requestor queries to a query priority queue;
  - adding proactively generated queries to the query priority queue, at lower priorities than the requestor queries; and
  - processing the requestor queries and the proactively generated queries according to their priorities.
6. *(previously presented)* The method according to claim 5, wherein the adding of the requestor queries step comprises:
  - separating a first requestor query into one or more sub-queries;
  - prioritizing the one or more first requestor sub-queries with respect to one another;
  - placing the one or more first requestor sub-queries in the query priority queue;
  - separating a second requestor query into one or more sub-queries;
  - prioritizing the one or more second requestor sub-queries with respect to one another; and
  - placing the one or more second requestor sub-queries in the query priority queue, ordering the first requestor sub-queries with respect to the second requestor sub-queries according to associated times of receipt, resolving priority disputes between simultaneously received first and second requestor queries so that higher priority sub-queries of the first and second

requestors are processed before lower priority sub-queries of the first and second requestors.

7. *(previously presented)* The method according to claim 3, wherein the proactively generating step comprises proactively generating queries to populate cache.
8. *(previously presented)* The method according to claim 3, wherein the proactively generating step comprises proactively generating queries to update cached information.
9. *(previously presented)* The method according to claim 3, wherein the proactively generating step comprises ordering the proactive queries for processing based on time-to-departures and age of associated cached information.
10. *(presently amended)* The method according to claim 9, wherein the proactively generating step further comprises:
  - generating a plurality of storage buckets in a memory;
  - associating at least a portion of the buckets with various time-to-departures;
  - ordering the buckets according at least to their associated time-of-departures;
  - bucketing the proactive queries according at least to their associated time-to-departures;

ordering the proactive queries within the buckets at least according to ages of previously cached information ~~data~~ associated with the proactive queries;

re-bucketing the proactive queries as their associated time-to-departures change; and

selecting a bucket for processing according to the ordering of the buckets, and processing the proactive queries within the selected bucket, skipping proactive queries for which information is presently cached and newer than a predetermined age.

11. *(previously presented)* The method according to claim 10, wherein:
  - the associating step comprises associating the buckets with various time-to-departures and according to one or more modes of transportation; and
  - the ordering of the buckets step comprises ordering the buckets according to the nearness to time-of-departures and the associated modes of transportation.
12. *(previously presented)* The method according to claim 10, further comprising:
  - adding the requestor queries to a query priority queue;
  - adding proactively generated queries from buckets selected in accordance with the selecting step to the query priority queue at lower priorities than the requestor queries; and
  - processing the requestor queries and the proactively generated queries in the query priority queue according to their priorities.

13. *(previously presented)* The method according to claim 12, wherein the adding of the requestor queries step comprises:
- separating a first requestor query into one or more sub-queries;
  - prioritizing the one or more first requestor sub-queries with respect to one another;
  - placing the one or more first requestor sub-queries in the query priority queue;
  - separating a second requestor query into one or more sub-queries;
  - prioritizing the one or more second requestor sub-queries with respect to one another; and
  - placing the one or more second requestor sub-queries in the query priority queue, ordering the first requestor sub-queries with respect to the second requestor sub-queries according to associated times of receipt, resolving priority disputes between simultaneously received first and second requestor queries so that higher priority sub-queries of the first and second requestor are processed before lower priority sub-queries of the first and second requestor.
14. *(presently amended)* The method according to claim 1, wherein:
- the receiving of requestor queries step comprises receiving a requestor preference for at least one of real-time information and[[/or]] cached information; and

the determining step comprises determining to provide the corresponding requestor with at least one of real-time information and~~[[/or]]~~ cached information based at least in part on the requestor preference.

15. *(presently amended)* The method according to claim 1, wherein the determining step comprises determining to provide a requestor with one or more of real-time information and~~[[/or]]~~ cached information based at least in part on one or more of the following factors:

- an availability of requested information in cache~~[[;]]~~,
- a currently cached flight availability count~~[[;]]~~,
- a requestor preference for cached information and~~/or realtime data~~~~[[;]]~~,
- a requestor preference for realtime information,
- an age of the cached information~~[[;]]~~,
- a requestor identification and~~/or requestor importance factor~~~~[[;]]~~,
- a requestor importance factor,
- a time of day~~[[;]]~~,
- a proxy availability~~[[;]]~~,
- availability of recently cached information~~[[;]]~~,
- one or more rules associated with an information source~~[[;]]~~,
- an activity/load at a realtime information source~~[[;]]~~,
- anticipated turn around time to an information source~~[[;]]~~,
- total number of seats~~[[;]]~~,
- a nearness to time-to-departure~~[[;]]~~,

a market importance[[:]],  
a frequency of prior availability changes[[:]], and  
a mode of transportation.

16. *(previously presented)* The method according to claim 1, further comprising:  
    querying one or more information sources through one or more  
    proxies.
17. *(previously presented)* The method according to claim 16, wherein the  
    querying through one or more proxies step comprises:  
        monitoring an operational status of the one or more proxies and  
        selecting proxies for querying based on the monitored operational status.
18. *(previously presented)* The method according to claim 16, wherein the  
    querying through one or more proxies step comprises:  
        monitoring response times for the one or more proxies and selecting  
        proxies for querying based at least on the response times.
19. *(previously presented)* The method according to claim 16, wherein the  
    querying through one or more proxies step comprises:  
        maintaining a list of unsupported suppliers for which information is  
        not available on the one or more information sources; and  
        returning queries for information from the unsupported suppliers  
        without querying an information source.



20. *(previously presented)* The method according to claim 16, wherein the querying through one or more proxies step comprises:
- maintaining proxy records for available proxies in a proxy queue; and
  - removing a higher priority proxy record from the proxy queue to process a query.
21. *(previously presented)* The method according to claim 20, wherein the maintaining of proxy records step comprises maintaining the proxy queue as part of a query priority queue.
22. *(presently amended)* The method according to claim 1, wherein the receiving of requestor queries step comprises receiving a request for one or more of the following additional types of information:
- hotel availability information[[]],
  - rental car availability information[[]],
  - taxi availability information[[]],
  - entertainment availability information[[]], and
  - restaurant availability information;
- wherein the prioritizing, the processing, the determining, and the providing steps are performed for the one or more additional types of information.

23. *(presently amended)* The method according to claim 14, wherein the receiving of a requestor preference step comprises permitting a requestor to select one of the following options:

return real-time information data only[[:]],

return cached information data only[[:]],

return cached information data if available, otherwise consult a real-time data information source[[:]], and

return cached information data if the cached information data is less than N seconds old, where N is real number, otherwise consult [[a]] the real-time data information source.

24. *(presently amended)* The method according to claim 14, wherein the receiving of a requestor preference step comprises permitting a requestor to select and prioritize a plurality of the following options:

return real-time information data only[[:]],

return cached information data only[[:]],

return cached information data if available, otherwise consult a real-time data information source[[:]], and

return cached information data if the cached information data is less than N seconds old, where N is real number, otherwise consult the real-time data information source.

25. *(presently amended)* The method according to claim 1, further comprising:  
caching recently updated information separately from less recently updated information and searching the recently updated cached information when real-time information ~~data~~ is sought.
26. *(previously presented)* The method according to claim 1, further comprising:  
permitting a requestor to specify approximate departure times in the requests for airline availability information; and  
searching a cache for requested information.
27. *(presently amended)* The method according to claim 26, wherein the searching a cache step comprises:  
rounding-up actual departure times for flights, providing at least the rounded-up actual departure times to a hashing function, and storing information associated with the flights in a hash table based on resulting rounded-up hash table indexes; ~~and~~  
rounding-down actual departure times for each flight, providing at least the rounded-down actual departure times to the hashing function, and storing information associated with the flights in the hash table based on resulting rounded-down hash table indexes;  
rounding-up a requestor-specified departure time, providing the rounded-up requestor-specified departure time to the hash function, and searching the hash table based on a resulting hash table index; and

rounding-down the requestor-specified departure time, providing the rounded-down requestor-specified departure time to the hash function, and searching the hash table based on a resulting hash table index.

28. *(previously presented)* The method according to claim 1, further comprising:
  - initiating a control thread for a query, whereby the query includes one or more sub-queries;
  - initiating a worker thread for each sub-query associated with the query;
  - prioritizing the worker threads with respect to one another; and
  - processing the worker threads according to associated priorities.
29. *(previously presented)* The method according to claim 1, further comprising sharing a flight availability count record between a plurality of flight records stored in a cache.
30. *(previously presented)* The method according to claim 1, further comprising:
  - associating multiple flight records as married flight records in a cache;
  - and
  - sharing a flight availability count record between at least one of the multiple flight records and another flight record in the cache.
31. *(previously presented)* The method according to claim 1, wherein the providing step comprises searching for cached information after waiting a pre-determined time for real-time information.

32. *(previously presented)* The method according to claim 1, further comprising:
- communicating with at least a portion of the one or more information sources through proxies, whereby the proxies interface with the at least a portion of the one or more of the information sources using information source specific codes.
33. *(presently amended)* The method according to claim 32, wherein the communicating step comprises:
- measuring one or more response characteristics associated with the proxies;
  - prioritizing the proxies according to the ~~performance~~ response characteristics measurements; and
  - maintaining a proxy priority queue, whereby queries are passed to higher priority proxies.
34. *(previously presented)* The method according to claim 32, wherein the communicating step comprises:
- identifying one or more information sources that proxies cannot communicate with; and
  - filtering out queries directed to the identified information sources.

35. *(previously presented)* The method according to claim 32, wherein the communicating step comprises:
- monitoring an operational status of the proxies; and
  - optimizing use of the proxies based on the operational status of the proxies.
36. *(previously presented)* The method according to claim 32, further comprising:
- simulating replies from the proxies.
37. *(previously presented)* The method according to claim 3, wherein the sending step comprises sending the one or more proactively generated queries during periods of low information source activity.
38. *(previously presented)* The method according to claim 3, wherein the proactively generating step comprises generating background threads that pose queries that appear to come from requestors.
39. *(previously presented)* The method according to claim 3, wherein the proactively generating step comprises filtering one or more queries out of proactive caching.
40. *(previously presented)* The method according to claim 39, wherein the filtering step comprises filtering out queries related to airline flights for which fares are not available.

41. *(previously presented)* The method according to claim 39, wherein the filtering step comprises filtering out queries related to flights on unsupported carriers.
42. *(previously presented)* The method according to claim 39, wherein the filtering step comprises filtering out queries related to flights that users are not expected to request.
43. *(previously presented)* The method according to claim 3, wherein the proactively generating step comprises assigning priority to queries according to an associated market.
44. *(previously presented)* The method according to claim 3, wherein the proactively generating step comprises assigning priorities to queries according to a frequency of flights.
45. *(previously presented)* The method according to claim 3, wherein the proactively generating step comprises assigning priorities to queries according to a frequency of changes associated with availability of corresponding flights.
46. *(previously presented)* The method according to claim 3, wherein the proactively generating step comprises assigning priority to queries according to a market importance.

47. *(previously presented)* The method according to claim 3, wherein the proactively generating step comprises assigning priority to queries according to nearness of departure time.
48. *(presently amended)* The method according to claim 3, wherein the proactively generating step comprises assigning priority to queries according to an age of cached information data.
49. *(previously presented)* The method according to claim 3, wherein the proactively generating step comprises assigning priority to queries according to a number of remaining available seats.
50. *(previously presented)* The method according to claim 3, wherein the proactively generating step comprises assigning priority to queries according to anticipated increases in travel volume.
51. *(presently amended)* The method according to claim 3, wherein the proactively generating step comprises assigning priority to queries according to at least one of a type of a product/service ~~and a type of a service~~.
52. *(previously presented)* The method according to claim 3, wherein the proactively generating step comprises assigning lower priority to forms of ground transportation.



53. *(previously presented)* The method according to claim 3, wherein the proactively generating step comprises assigning lower priority to flights that use propeller planes.
54. *(previously presented)* The method according to claim 3, wherein the proactively generating step comprises assigning priority according to a total number of available seats.
55. *(previously presented)* The method according to claim 3, wherein the proactively generating step comprises updating cached airline availability information according to multiple priorities.
56. *(previously presented)* The method according to claim 55, wherein the proactively generating step further comprises encoding the multiple priorities into a mathematical function that assigns a combined priority value to units of cached airline availability information, and updating the cached airline availability information according to the associated combined priority values.
57. *(previously presented)* The method according to claim 55, wherein the proactively generating step further comprises:
- prioritizing the cached airline availability information according to departure times;
  - prioritizing the cached airline availability information according to one or more additional features; and

updating the cached airline availability information based on a combination of the priorities associated with the departure time and the one or more additional features.

58. *(previously presented)* The method according to claim 1, further comprising:  
predicting an availability status.
59. *(previously presented)* The method according to claim 58, wherein the predicting step comprises predicting availability status based on prior observed variables, including prior availability information.
60. *(previously presented)* The method according to claim 59, wherein the predicting step further comprises:  
identifying one or more factors associated with availability status;  
learning a relationship between historical values for the one or more factors and historical values for availability status;  
generating a function according to the learned relationship; and  
providing new values for the one or more factors to the function,  
whereby the function outputs predicted values for availability status.
61. *(previously presented)* The method according to claim 1, further comprising:  
separating a first requestor query into one or more sub-queries;  
prioritizing the one or more first requestor sub-queries with respect to one another;

placing the one or more first requestor sub-queries in a query priority queue;

separating a second requestor query into one or more sub-queries;

prioritizing the one or more second requestor sub-queries with respect to one another;

placing the one or more second requestor sub-queries in the query priority queue, ordering the first requestor sub-queries with respect to the second requestor sub-queries according to associated times of receipt, resolving priority disputes between simultaneously received first and second requestor queries so that higher priority sub-queries of the first and second requestors are processed before lower priority sub-queries of the first and second requestors; and

processing the queries in the query priority queue according to their associated priorities.

62. *(presently amended)* The method according to claim 1, further comprising:

monitoring airline availability information traffic between an airline availability information source and one or more clients of the airline availability information source;

determining a likelihood that information will be received within a period of time ~~in a near future~~ by the monitoring;

generating proactive queries for information not likely to be received within the period of time ~~in the near future~~; and

caching information returned in response to the proactive queries.

63. *(presently amended)* A method of interfacing between one or more requestors and one or more information sources, comprising:

querying one or more information sources for information;

receiving the ~~requested~~ information from the one or more information sources;

caching the received information;

receiving queries from requestors for at least a portion of the information;

prioritizing the requestor queries;

processing the requestor queries in accordance with the associated priorities;

determining to provide the requestors with at least one of real-time ~~airline-availability~~ information and cached ~~airline-availability~~ information based at least in part on one or more factors associated with one or more of the requestors, the requests, the requested ~~airline-availability~~ information, and~~[[/or]]~~ the one or more ~~airline-availability~~ information sources; and

providing information to the requestors in accordance with the determining.

64. *(presently amended)* A computer program product including a computer useable medium having computer program logic stored therein to enable a computer system to interface between one or more requestors and one or more information sources, wherein said computer program logic comprises:

a receiving function that causes the computer system to receive requests for information from information requestors;

a prioritizing function that causes the computer system to prioritizing the requests and to process the requests in accordance with the associated priorities;

a query process function that causes the computer system to determine to process a query, at least, with out-of-cache or with real-time information, based at least in part on one or more factors associated with one or more of the requestors, the requests, the requested ~~airline-availability~~ information, and~~[[/or]]~~ the one or more ~~airline-availability~~ information sources;

a query function that causes the computer system to query the one or more information sources when it determines to process a query with real-time information; and

a cache control function that causes the computer system to cache information returned from the one or more information sources.

65. - 139. *(cancelled)*

140. *(presently amended)* A method of interfacing between one or more requestors and one or more airline availability information sources, comprising:

querying one or more airline availability information sources for airline availability information;

receiving the requested airline availability information from the one or more airline availability information sources;

caching the received airline availability information;

receiving queries from requestors for airline availability information;

separating a first requestor query into one or more sub-queries;

prioritizing the one or more first requestor sub-queries with respect to one another;

placing the one or more first requestor sub-queries in a query priority queue;

separating a second requestor query into one or more sub-queries;

prioritizing the one or more second requestor sub-queries with respect to one another;

placing the one or more second requestor sub-queries in the query priority queue, ordering the first requestor sub-queries with respect to the second requestor sub-queries according to associated times of receipt, resolving priority disputes between simultaneously received first and second requestor queries so that higher priority sub-queries of the first and second

requestors are processed before lower priority sub-queries of the first and second requestors;

proactively generating one or more queries independent of the requestor queries;

adding the proactively generated queries to the query priority queue at lower priorities than the requestor queries;

processing the requestor queries and the proactively generated queries according to their priorities;

determining to provide the requestors with at least one of the following types of airline availability information[[:]],

real-time information, and

cached information;

providing information to the requestors in accordance with the determining; and

sending the one or more proactively generated queries to an airline availability information source and caching information returned therefrom.

141. *(presently amended)*. A method of interfacing between one or more requestors and one or more airline availability information sources, comprising:

querying one or more airline availability information sources for airline availability information;

receiving the requested airline availability information from the one or more airline availability information sources;

caching the received airline availability information;

    receiving queries from requestors for airline availability information;

    determining to provide the requestors with at least one of the following types of airline availability information[[]],

        real-time information, and

        cached information;

    providing information to the requestors in accordance with the determining;

    proactively generating queries independent of the requestor queries;

    generating a plurality of storage buckets in a memory;

    associating at least a portion of the buckets with various time-to-departures;

    ordering the buckets according at least to their associated time-of-departures;

    bucketing the proactive queries according at least to their associated time-to-departures;

    ordering the proactive queries within the buckets at least according to ages of previously cached information ~~data~~ associated with the proactive queries;

    re-bucketing the proactive queries as their associated time-to-departures change;

    selecting a bucket for processing according to the ordering of the buckets and processing the proactive queries within the selected bucket,



skipping proactive queries for which information is presently cached and newer than a predetermined age, wherein the processing includes sending the proactively generated queries to one or more airline availability information sources according to the bucket selecting; and  
caching information returned from the proactive queries.

142. *(previously presented)* The method according to claim 141, wherein:  
the associating step includes associating the buckets with various time-to-departures and according to one or more modes of transportation; and  
the ordering step includes ordering the buckets according to the nearness to time-of-departures and the associated modes of transportation.
143. *(previously presented)* The method according to claim 141, further comprising:  
adding the requestor queries to a query priority queue;  
adding proactively generated queries from buckets selected in accordance with the selecting, to the query priority queue, at lower priorities than the requestor queries; and  
processing the requestor queries and the proactively generated queries in the query priority queue according to their priorities.

144. *(previously presented)* The method according to claim 143, wherein the adding of requestor queries step comprises:

separating a first requestor query into one or more sub-queries;

prioritizing the one or more first requestor sub-queries with respect to one another;

placing the one or more first requestor sub-queries in the query priority queue;

separating a second requestor query into one or more sub-queries;

prioritizing the one or more second requestor sub-queries with respect to one another; and

placing the one or more second requestor sub-queries in the query priority queue, ordering the first requestor sub-queries with respect to the second requestor sub-queries according to associated times of receipt, resolving priority disputes between simultaneously received first and second requestor queries so that higher priority sub-queries of the first and second requestor are processed before lower priority sub-queries of the first and second requestor.

145. *(presently amended)* A method of interfacing between one or more requestors and one or more airline availability information sources, comprising:
- querying one or more airline availability information sources for airline availability information;
  - receiving the requested airline availability information from the one or more airline availability information sources;
  - caching the received airline availability information;
  - receiving queries from requestors for airline availability information;
  - determining to provide the requestors with at least one of the following types of airline availability information[[:]],
  - real-time information, and
  - cached information;
  - providing information to the requestors in accordance with the determining; and
  - querying one or more of the information sources through one or more proxies, including monitoring an operational status of the one or more proxies and selecting proxies for querying based on the monitored operational status.

146. *(presently amended)* A method of interfacing between one or more requestors and one or more airline availability information sources, comprising:
- querying one or more airline availability information sources for airline availability information;
  - receiving the requested airline availability information from the one or more airline availability information sources;
  - caching the received airline availability information;
  - receiving queries from requestors for airline availability information;
  - determining to provide the requestors with at least one of the following types of airline availability information[[:]],
  - real-time information, and
  - cached information;
  - providing information to the requestors in accordance with the determining; and
  - querying one or more of the information sources through one or more proxies, including monitoring response times for the one or more proxies and selecting proxies for querying based at least on the response times.

147. *(presently amended)* A method of interfacing between one or more requestors and one or more airline availability information sources, comprising:
- querying one or more airline availability information sources for airline availability information;
  - receiving the requested airline availability information from the one or more airline availability information sources;
  - caching the received airline availability information;
  - receiving queries from requestors for airline availability information;
  - determining to provide the requestors with at least one of the following types of airline availability information[[:]],
  - real-time information, and
  - cached information;
  - providing information to the requestors in accordance with the determining; and
  - querying one or more of the information sources through one or more proxies, including maintaining a list of unsupported suppliers for which information is not available on the one or more information sources and returning queries for information from the unsupported suppliers without querying an information source.

148. *(presently amended)* A method of interfacing between one or more requestors and one or more airline availability information sources, comprising:
- querying one or more airline availability information sources for airline availability information;
  - receiving the requested airline availability information from the one or more airline availability information sources;
  - caching the received airline availability information;
  - receiving queries from requestors for airline availability information;
  - determining to provide the requestors with at least one of the following types of airline availability information[[:]],
  - real-time information, and
  - cached information; and
  - providing information to the requestors in accordance with the determining; and
  - querying one or more of the information sources through one or more proxies, including maintaining proxy records for available proxies in a proxy queue and removing a higher priority proxy record from the proxy queue to process a query.
149. *(previously presented)* The method according to claim 148, further comprising maintaining the proxy queue as part of a query priority queue.

150. *(presently amended)* A method of interfacing between one or more requestors and one or more airline availability information sources, comprising:
- querying one or more airline availability information sources for airline availability information;
  - receiving the requested airline availability information from the one or more airline availability information sources;
  - caching the received airline availability information;
  - receiving queries from requestors for airline availability information;
  - permitting at least one of the requestors to select one of the following options[[:]],
- return real-time information ~~data~~ only,
  - return cached information ~~data~~ only,
  - return cached information ~~data~~ if available, otherwise consult a real-time ~~data~~ information source, and
  - return cached information ~~data~~ if the cached information ~~data~~ is less than N seconds old, where N is real number, otherwise consult [[a]] the real-time ~~data~~ information source;
  - determining to provide the requestors with at least one of the following types of airline availability information based at least in part on a requestor selected option[[:]],
- real-time information, and
  - cached information; and

providing information to the requestors in accordance with the determining.

151. *(presently amended)* A method of interfacing between one or more requestors and one or more airline availability information sources, comprising:

querying one or more airline availability information sources for airline availability information;

receiving the requested airline availability information from the one or more airline availability information sources;

caching the received airline availability information;

receiving queries from requestors for the airline availability information;

permitting at least one of the requestors to select and prioritize a plurality of the following options[[;]],

return real-time information ~~data~~ only[[;]],

return cached information ~~data~~ only[[;]],

return cached information ~~data~~ if available, otherwise consult a real-time ~~data~~ information source[[;]], and

return cached information ~~data~~ if the cached information ~~data~~ is less than N seconds old, where N is real number, otherwise consult the real-time ~~data~~ information source;



determining to provide the requestors with at least one of the following types of airline availability information based at least in part on requestor selected options and prioritizations[[]],  
real-time information, and  
cached information; and  
providing information to the requestors in accordance with the determining.

152. *(presently amended)* A method of interfacing between one or more requestors and one or more airline availability information sources, comprising:  
querying one or more airline availability information sources for airline availability information;  
receiving the requested airline availability information from the one or more airline availability information sources;  
caching the received airline availability information;  
receiving a query from a requestor for airline availability information, wherein the query includes one or more sub-queries;  
initiating a control thread for the query[[]];  
initiating a worker thread for each sub-query associated with the query;  
prioritizing the worker threads with respect to one another;  
processing the worker threads according to the associated priorities;  
determining to provide the requestor with at least one of the following types of airline availability information[[]],

real-time information, and  
cached information; and  
providing information to the requestor in accordance with the  
determining.

153. *(presently amended)* A method of interfacing between one or more requestors  
and one or more airline availability information sources, comprising:

querying one or more airline availability information sources for  
airline availability information;

receiving the requested airline availability information from the one or  
more airline availability information sources;

caching the received airline availability information;

sharing a flight availability count record between a plurality of cached  
flight records;

receiving queries from requestors for airline availability information;

determining to provide the requestors with at least one of the following  
types of airline availability information[[;]],

real-time information, and

cached information; and

providing information to the requestors in accordance with the  
determining.

154. *(presently amended)* A method of interfacing between one or more requestors and one or more airline availability information sources, comprising:
- querying one or more airline availability information sources for airline availability information;
  - receiving the requested airline availability information from the one or more airline availability information sources;
  - caching the received airline availability information;
  - associating multiple flight records as married flight records in the cache;
  - sharing a flight availability count record between at least one of the multiple flight records and another flight record in the cache;
  - receiving queries from requestors for airline availability information;
  - determining to provide the requestors with at least one of the following types of airline availability information[[:]],
    - real-time information, and
    - cached information; and
  - providing information to the requestors in accordance with the determining.

155. *(presently amended)* A method of interfacing between one or more requestors and one or more airline availability information sources, comprising:
- querying one or more airline availability information sources for airline availability information;
  - receiving the requested airline availability information from the one or more airline availability information sources;
  - caching the received airline availability information;
  - receiving queries from requestors for airline availability information;
  - determining to provide the requestors with at least one of the following types of airline availability information[[:]],
    - real-time information, and
    - cached information;
  - providing information to the requestors in accordance with the determining; and
  - searching for cached information after waiting a pre-determined time for real-time information.

156. *(presently amended)* A method of interfacing between one or more requestors and one or more airline availability information sources, comprising:
- querying one or more airline availability information sources for airline availability information;
  - receiving the requested airline availability information from the one or more airline availability information sources;
  - caching the received airline availability information;
  - receiving queries from requestors for airline availability information;
  - determining to provide the requestors with at least one of the following types of airline availability information[[:]],
    - real-time information, and
    - cached information;
  - providing information to the requestors in accordance with the determining; and
  - communicating with at least a portion of the one or more airline availability information sources through proxies, whereby the proxies interface with the at least a portion of the one or more airline availability information sources using airline availability information source specific codes.

157. *(presently amended)* The method according to claim 156, wherein the communicating step comprises:
- measuring one or more response characteristics associated with the proxies;
  - prioritizing the proxies according to the ~~performance~~ response characteristics measurements; and
  - maintaining a proxy priority queue, whereby queries are passed to higher priority proxies.
158. *(presently amended)* The method according to claim 156, wherein the communicating step comprises:
- identifying one or more airline availability information sources that proxies cannot communicate with; and
  - filtering out queries directed to the identified airline availability information sources.
159. *(previously presented)* The method according to claim 156, wherein the communicating step comprises:
- monitoring an operational status of the proxies; and
  - optimizing use of the proxies based on the operational status of the proxies.
160. *(previously presented)* The method according to claim 156, further comprising simulating replies from the proxies.

161. *(presently amended)* A method of interfacing between one or more requestors and one or more airline availability information sources, comprising:

querying one or more airline availability information sources for airline availability information;

receiving the requested airline availability information from the one or more airline availability information sources;

caching the received airline availability information;

receiving queries from requestors for airline availability information;

determining to provide the requestors with at least one of the following types of airline availability information[[:]],

real-time information, and

cached information;

providing information to the requestors in accordance with the determining;

proactively generating one or more queries independent of requestor queries, including generating background threads that pose queries that appear to come from requestors; and

sending the one or more proactively generated queries to an airline availability information source and caching information returned therefrom.

162. *(presently amended)* A method of interfacing between one or more requestors and one or more airline availability information sources, comprising:

querying one or more airline availability information sources for airline availability information;

receiving the requested airline availability information from the one or more airline availability information sources;

caching the received airline availability information;

receiving queries from requestors for airline availability information;

determining to provide the requestors with at least one of the following types of airline availability information[[:]],

real-time information, and

cached information;

providing information to the requestors in accordance with the determining;

proactively generating one or more queries independent of requestor queries, including filtering one or more queries out of proactive caching; and

sending the one or more proactively generated queries to an airline availability information source and caching information returned therefrom.

163. *(previously presented)* The method according to claim 162, wherein the filtering step includes filtering out queries related to airline flights for which fares are not available.



164. *(previously presented)* The method according to claims 162, wherein the filtering step includes filtering out queries related to flights on unsupported carriers.
165. *(previously presented)* The method according to claims 162, wherein the filtering step includes filtering out queries related to flights that users are not expected to request.
166. *(presently amended)* A method of interfacing between one or more requestors and one or more airline availability information sources, comprising:
- querying one or more airline availability information sources for airline availability information;
  - receiving the requested airline availability information from the one or more airline availability information sources;
  - caching the received airline availability information;
  - receiving queries from requestors for airline availability information;
  - determining to provide the requestors with at least one of the following types of airline availability information[[:]],
  - real-time information, and
  - cached information;
  - providing information to the requestors in accordance with the determining;

proactively generating queries independent of requestor queries and assigning priority to the proactively generated queries according to a total number of available seats; and

sending the one or more proactively generated queries to an airline availability information source and caching information returned therefrom.

167. *(presently amended)* A method of interfacing between one or more requestors and one or more airline availability information sources, comprising:

querying one or more airline availability information sources for airline availability information;

receiving the requested airline availability information from the one or more airline availability information sources;

caching the received airline availability information;

receiving queries from requestors for airline availability information;

determining to provide the requestors with at least one of the following types of airline availability information[[:]],

real-time information, and

cached information;

providing information to the requestors in accordance with the determining;

proactively generating one or more queries independent of requestor queries, including proactively generating one or more queries to update cached airline availability information according to multiple priorities; and

sending the one or more proactively generated queries to an airline availability information source and caching information returned therefrom.

168. *(previously presented)* The method according to claim 167, wherein the proactively generating step comprises:

prioritizing the cached airline availability information according to departure times;

prioritizing the cached airline availability information according to one or more additional features; and

updating the cached airline availability information based on a combination of the priorities associated with the departure time and one or more additional features.

169. *(presently amended)* A method of interfacing between one or more requestors and one or more airline availability information sources, comprising:

querying one or more airline availability information sources for airline availability information;

receiving the requested airline availability information from the one or more airline availability information sources;

caching the received airline availability information;

receiving queries from requestors for airline availability information;

predicting an availability status based on prior observed variables,  
including prior availability information, wherein the predicting includes[[]],  
identifying one or more factors associated with availability  
status,  
learning a relationship between historical values for the one or  
more factors and historical values for availability status,  
generating a function according to the learned relationship, and  
providing new values for the one or more factors to the  
function, whereby the function outputs predicted values for availability status;  
determining to provide the requestors with at least one of the following  
types of airline availability information[[]],  
real-time information,  
cached information, and  
predicted information; and  
providing information to the requestors in accordance with the  
determining.

170. *(presently amended)* A method of interfacing between one or more requestors and one or more airline availability information sources, comprising:  
querying one or more airline availability information sources for  
airline availability information;  
receiving the requested airline availability information from the one or  
more airline availability information sources;

caching the received airline availability information;

    receiving queries from requestors for airline availability information;

    separating a first requestor query into one or more sub-queries;

    prioritizing the one or more first requestor sub-queries with respect to one another;

    placing the one or more first requestor sub-queries in a query priority queue;

    separating a second requestor query into one or more sub-queries;

    prioritizing the one or more second requestor sub-queries with respect to one another;

    placing the one or more second requestor sub-queries in the query priority queue, ordering the first requestor sub-queries with respect to the second requestor sub-queries according to associated times of receipt, resolving priority disputes between simultaneously received first and second requestor queries so that higher priority sub-queries of the first and second requestors are processed before lower priority sub-queries of the first and second requestors;

    processing the queries in the query priority queue according to their associated priorities;

    determining to provide the requestors with at least one of the following types of airline availability information[[:]],

        real-time information, and

        cached information; and

providing information to the requestors in accordance with the determining.

171. (*presently amended*) A method of interfacing between one or more requestors and one or more airline availability information sources, comprising:

monitoring airline availability information traffic between an airline availability information source and one or more clients of the airline availability information source;

caching at least a portion of the monitored airline availability information traffic;

determining a likelihood that information will be received within a period of time in the near future by the monitoring;

generating proactive queries for information not likely to be received within the period of time in the future;

caching information returned in response to the proactive queries;

receiving a queries from requestors for airline availability information;

determining to provide the requestors with at least one of the following types of airline availability information[[]],

real-time information, and

cached information; and

providing information to the requestors in accordance with the determining.